

PatchMix: Learning Transferable Semi-Supervised Representation by Predicting Patches

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Abstract : In this work, we propose PatchMix, a semi-supervised method for pre-training visual representations. PatchMix mixes patches of two images and then solves an auxiliary task of predicting the label of each patch in the mixed image. Our experiments on the CIFAR-10, 100 and the SVHN dataset show that the representations learned by this method encodes useful information for transfer to new tasks and outperform the baseline Residual Network encoders by on CIFAR 10 by 12% on ResNet 101 and 2% on ResNet-56, by 4% on CIFAR-100 on ResNet101 and by 6% on SVHN dataset on the ResNet-101 baseline model.

Keywords : self-supervised learning, representation learning, computer vision, generalization

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